

AMENDMENTS TO THE CLAIMS

In the claims:

This Listing of Claims replaces all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A peptide comprising SEQ. ID NO.:1 derived from human transcription factor SIM2 amino acid sequence beginning at the 558th marker of SEQ. ID No.:1 human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2, ~~or its active fragment, for transducing~~ wherein the peptide is capable of transducing a biologically active, functional or/and regulatory molecule into prokaryotic cells or eukaryotic cells.
2. (Withdrawn) The peptide comprising amino acid sequence of SEQ. ID No.: 1 or its active fragment of claim 1, wherein at least any one of Arginine, Lysine and Alanine is substituted with structurally and/or functionally similar amino acid(s).
3. (Currently Amended) The peptide ~~comprising amino acid sequence of SEQ. ID No.:1 or its active fragment of claim 1,~~ wherein the biologically active functional regulatory molecule is any one of ~~selected from the group consisting of a protein, a DNA fragment, an RNA fragment, a carbohydrate, a lipid and or a chemical compound.~~
4. (Currently Amended) The peptide ~~comprising amino acid sequence of SEQ. ID No.:1 or its active fragment of claim 1,~~ wherein the peptide ~~or its active fragment~~ is transduced into the cells of prokaryotes or eukaryotes ~~through and administered~~ *in vivo* through administration routes comprising intramuscular, intraperitoneal, intravein, oral, nasal, subcutaneous, intradermal, mucosal and inhaling routes.
5. (Currently Amended) A recombinant expression vector comprising: a DNA sequence DNAs encoding a peptide comprising SEQ. ID NO.:1 derived from human transcription factor SIM2 beginning at the 558th marker of human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2 ~~the peptide or its active fragment of claim 1, DNAs~~

~~encoding one or more homologous or heterologous protein as a biologically active functional regulatory molecule and operably linked expression regulatory sequence.~~

6. (Withdrawn) A recombinant expression vector comprising: the peptide or its active fragment of claim 1; DNA/RNA encoding DNA/RNA binding protein that binds to specific DNA/RNA sequence, or a desired DNA/RNA to be transduced into cells; DNA/RNA fragment containing one or more successive nucleic acid sequences that bind selectively to specific DNA/RNA binding protein; and operably linked expression regulatory sequence.

7. (Withdrawn) The recombinant expression vector of claim 6, wherein the expression regulatory sequence is a regulatory domain including promoter or enhancer that is specific to cell, tissue or organ where the desired DNA/RNA is transduced to and expressed selectively.

8. (Withdrawn) The recombinant expression vector of claim 5, wherein the vector is transduced into the prokaryotic cells or eukaryotic cells through administration routes comprising intramuscular, intraperitoneal, intravein, oral, nasal, subcutaneous, intradermal, mucosal and inhaling routes.

9. (Withdrawn) The recombinant expression vector of claim 5 comprising: nucleic acid sequence that is recognized and cleaved by the protease present on a cell surface; and DNA encoding ecto domain of a ligand that specifically binds to a receptor distinctively present on the surface of cell, tissue or organ to which the desired protein is transduced, or DNA encoding monoclonal antibody (mAb) that binds specifically to the receptor.

10. (Withdrawn) The recombinant expression vector of claim 9, wherein the protease specifically present on the cell surface is MMP (Matrix Metallo Protease).

11. (Withdrawn) The recombinant expression vector of claim 9, wherein the mAb is Fab fragment, F(ab') fragment, single strand Fv or humanized mAb.

12. (Withdrawn) The recombinant expression vector of claim 5, characterized by comprising further tag sequence for the purification of the desired protein.

13. (Withdrawn) The recombinant expression vector of claim 12, characterized by comprising further six successive histidine codons.

14. (Withdrawn) The recombinant expression vector of claim 5, characterized by comprising further amino acid sequence that is specifically recognized and cleaved by intracellular enzyme.

15. (Withdrawn) The recombinant expression vector of claim 14, wherein the amino acid sequence, which is specifically recognized and cleaved by intracellular enzyme, is Asp-Asp-Asp-Asp-Lys enterokinase cleavage site or Glu-Asn-Leu-Tyr-Phe-Gln-Gly tev cleavage site.

16. (Withdrawn) The recombinant expression vector of claim 5, characterized by comprising further one or more glycine, and spacer amino acids or nucleic acid including AYY amino acids, for the structural and functional stability or for the flexibility of the protein.

17-29. (Canceled)

30. (Currently Amended) A method of transducing ~~[[the]] a -peptide or its active fragment of claim 3~~ into a prokaryotic or eukaryotic cell comprising:

preparing a peptide construct comprising SEQ. ID NO.:1 derived from human transcription factor SIM2 beginning at the 558th marker of human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2, wherein the peptide includes a biologically active, functional or/and regulatory molecule; and

delivering the peptide construct *in vivo* to a subject through administration routes comprising intramascular, intraperitoneal, intravein, oral, nasal, subcutaneous, intradermal, mucosal and inhalation routes.

31-37. (Canceled)